

#### ABSTRACT OF THE DISCLOSURE

Methods for isolating CaMK-X1 genes are provided. The CaMK-X1 nucleic acid compositions find use in identifying homologous or related proteins and the DNA sequences encoding such proteins; in producing compositions that modulate the expression or function of the protein; and in studying associated physiological pathways. In addition, modulation of the gene activity *in vivo* is used for prophylactic and therapeutic purposes, such as identification of cell type based on expression, and the like.